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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/661,486

09/15/2003

Sang Hyun Kim

041993-5237

9240

9629

7590

02/16/2005

MORGAN LEWIS & BOCKIUS LLP
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WASHINGTON, DC 20004

EXAMINER

VESPERMAN, WILLIAM C

ART UNIT

PAPER NUMBER

2813


DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/661,486

Applicant(s) 

KIM, SANG HYUN

Examiner

William C. Vesperman

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-23 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in reply to applicant's filing of 9/15/2003.

Election/Restrictions

2. This application contains claims directed to the following patentably distinct species of the claimed invention:

- I. A crystallization method of an amorphous semiconductor layer comprising: providing an amorphous semiconductor layer having a first thickness; crystallizing the amorphous semiconductor layer in a first direction; partially reducing the crystallized semiconductor layer to a second thickness less than the first thickness; and crystallizing the etched semiconductor layer in a second direction. Class 438, subclass 1+. See embodiments. (Claims 1 - 7 are suggested.)

- II. A method of fabricating a thin film transistor comprising: providing a substrate; forming an amorphous semiconductor layer over the substrate; crystallizing the amorphous semiconductor layer in a first direction, reducing the crystallized semiconductor layer, and crystallizing in a second direction to form a polycrystalline semiconductor layer; forming a gate insulating layer on the polycrystalline semiconductor layer; forming a gate electrode on the gate insulating layer; forming an insulating layer on the substrate; and forming a source electrode and a drain electrode contacting the polycrystalline semiconductor layer. Class 438, subclass 1+. See embodiments. (Claims 8 -10 are suggested.)

III. A method of fabricating a thin film transistor comprising: providing a substrate; forming an amorphous semiconductor layer over the substrate; crystallizing the amorphous semiconductor layer into a polycrystalline semiconductor having grains with a quasi-rectangular shape; forming a gate insulating layer on the polycrystalline semiconductor layer; forming a gate electrode on the gate insulating layer; forming an insulating layer on the substrate; and forming a source electrode and a drain electrode contacting the polycrystalline semiconductor layer. Class 438, subclass 1+. See embodiments. (Claims 11 -13 are suggested.)

IV. A method of fabricating a liquid crystal display device comprising: forming a first thin film transistor in a driving circuit region by using a crystallized semiconductor layer as an active layer by providing a first substrate composed of a pixel region and a driving circuit region, forming an amorphous semiconductor layer on the first substrate, laterally crystallizing the amorphous semiconductor layer in a first direction, etching the crystallized semiconductor layer, and laterally crystallizing the crystallized semiconductor layer in a second direction perpendicular to the first direction; forming a second thin film transistor in the pixel region; forming a pixel electrode electrically connected to the second thin film transistor on the first substrate; providing a second substrate where a color filter layer is formed; attaching the first substrate and the second substrate to each other; and forming a liquid crystal layer between the first substrate and the second substrate. Class 438, subclass 1+. See embodiments. (Claims 14 - 23 are suggested.)

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. Be cause these inventions (Species I – IV) are distinct for the reasons above, restriction for examining purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143)

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. A telephone call was made to Robert J. Goodell on February 10, 2005 to request an oral election to the above restriction requirement, but did not result in an election being made.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Vesperman whose telephone number is 571-272-1701. The examiner can normally be reached on Mon. - Fri., 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on 571-272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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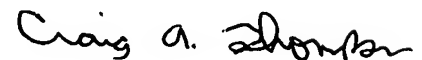
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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February 10, 2005



**CRAIG A. THOMPSON
PRIMARY EXAMINER**